REDESCRIPTION AND GENERIC POSITION OF *PSOCUS STRIATIFRONS* McLACHLAN (PSOCOPTERA: PSOCIDAE)

By C. N. Smithers
The Australian Museum, College Street, Sydney

Abstract

Psocus striatifrons McLachlan is redescribed after examination of the type specimen and transferred to *Tanystigma* Smithers.

Introduction

McLachlan (1866, p. 351) described *Psocus striatifrons* from "Australia meridionali". This was one of the earliest species of Psocoptera to be described from Australia. In a postscript to the same paper (*loc. cit.*, p. 352) he transferred it to *Stenopsocus* Hagan.

Stenopsocus is of mainly Palaearctic and Indo-Malayan distribution with one species occurring from West Irian, through Papua New Guinea, to northern New South Wales. Despite fairly extensive collecting in southern Australia the genus has not been found and some doubts arose as to the correct generic position of *S. striatifrons.* Brief examination of the type, a female, in the Hope Department, Oxford, confirmed that it was a member of the Psocidae and not one of the Stenopsocidae. Through the courtesy of Mr Ivor Lansbury I have been able to borrow the type for closer study. The results are presented here.

The type specimen was pinned on a micropin through card attached to a standard insect pin. Labels attached to the pin are as follows:–

1. A small white label, hand written, bearing the words "S. Australia". (Note: not "Australia meridionali" as in McLachlan 1866).
2. A blue diamond-shaped label with W in black ink.
3. A blue label with hand written "Psocus striatifrons McL".
4. A white label with narrow red border, with printed words "TYPE" and "Coll. Hope Oxon." and hand written "Trans. Ent. Soc. 1866, p. 351".
5. A large black bordered label with printed words "TYPE" and "HOPE DEPT. OXFORD." and hand written "Psocus striatifrons M'Lachlan."

The specimen has now been removed from the pin, using detergent, dissected and mounted on a slide to which the same labels have been glued.

Condition of type.–The type was in fairly good condition. It lacked antennae, except for the scape and pedicel of the right side. The distal part of the right fore wing was missing and the left fore wing damaged. The right eye and the subgenital plate were missing.

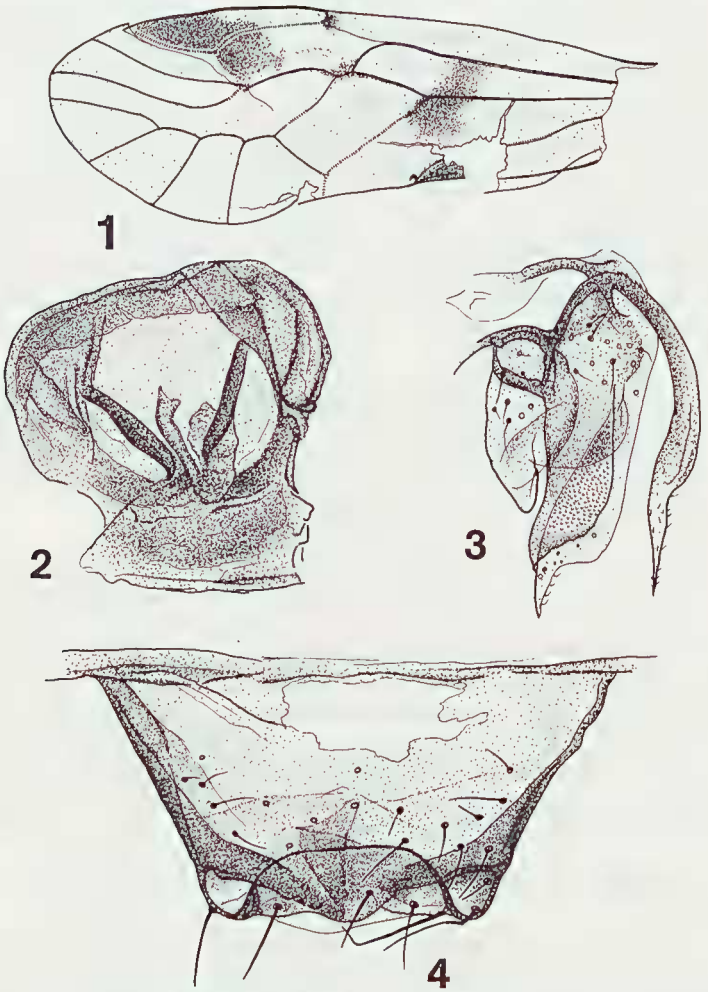
Redescription of the type of *Psocus striatifrons* McLachlan

Female

Coloration.–As described by McLachlan (1966 p. 351).

Morphology.–Length of body not measurable owing to collapsed state of abdomen. Median epicranial suture very distinct, anterior arms evanescent.

Postclypeus very well developed and strongly bulbous. Eyes fairly small, not reaching level of vertex. IO/D (Badonnel): 3.1: PO: 0.75. Anterior ocellus much smaller and more ovoid than lateral ocelli. Measurements of hind leg: F: 0.55 mm.: T: 1.15 mm.: t_1 : 0.27 mm.: t_2 : 0.15 mm.: rt: 1.7: 1: ct: 21, 0. Ctenidiobothria very small, poorly developed. Fore wing venation (Fig. 1). Pterostigmal spurvein well developed, fine, not reaching Rs. Cu_{1a} fused with M for a length. Fore wing length: 3.0 mm: width: 1.2 mm. Fore wing (Fig. 1). Epiproct (Fig. 4). Gonapophyses (Fig. 3). Subgenital plate missing. Ninth sternite sclerification (Fig. 2).



Figs 1-4. *Tanystigma striatifrons* (McLachlan), ♀ (1) left fore wing; (2) ninth sternite; (3) gonapophyses; (4) epiproct.

Discussion

Position of *Psocus striatifrons*

Hagen (1866) distinguished *Stenopsocus* from *Psocus* on the basis of the presence of a pterostigmal spurvein in *Stenopsocus.* He did not include the presence of a crossvein between Cu_{1a} and M in his characters for the genus. The distinguishing features were indicated in a key and the one feature he gave was sufficient to make the distinction clear. Genitalic features were not, at that time, used in generic definitions. McLachlan, when describing *P. striatifrons*, took the pterostigmal spurvein to be longer than it is. This is an understandable error as the fairly extensive postpterostigmal mark obscures the extent of the spurvein unless the specimen is examined with special care. As it is, venational features alone establish the specimen as belonging to the Psocidae not the Stenopsocidae. The form of the genitalia confirms this position. In the Stenopsocidae the females have reduced gonopophyses of relatively simple form.

Within the Psocidae the species falls within the definition of *Tanystigma* Smithers and is very similar to other species in the genus. *Tanystigma* (Smithers, 1983) is characterized by a combination of the following features: Rs and M fused for a length in fore wing: pterostigmal spurvein present: pterostigma elongate, relatively narrow and concave basad of spurvein; first section of Cu_{1a} longer than second and at an angle to it; external valve of gonapophyses lobed; subgenital plate with short lobe and divergent scleritized bands. Most of these features can be seen in the type of *P. striatifrons.*

Tanystigma is known only from Australia. *Tanystigma striatifrons* **(comb. nov.)** can be distinguished from the other species as follows. It is smaller than *T. dubium* (New) and *T. bifurcata* Smithers which both have a fore wing length greater than 4 mm and more extensive wing markings. *T. dubium* and *T. bifurcata* have a distinct dark area near the wing margin between R_1 and R_{2+3}. The sclerification of the ninth sternite is distinctive. *T. edwardsi* (New) has entirely hyaline wings except for the dark pterostigma which is very long and narrow with a poorly developed hind angle. *T. elongata* Smithers has very extensive wing markings, especially in the distal part of the fore wing where they occupy most of the cells anterior to M. *T. inglewoodense* (New) is larger (fore wing length 3.9 mm.) than *T. striatifrons* and the wing markings are a little more extensive; the mark which borders Rs and M fusion is particularly well developed. In *T. latimentula* (Smithers) the wings are hyaline and in *T. paulum* (Smithers) the female fore wing has the transverse band reduced to a patch basad of the separation of M and Cu and a mark basad of the nodulus. *T. paulum* is also larger (fore wing 4.0 mm.). Both *T. notialis* (Smithers) and *T. tardipes* (Edwards) are very much larger (fore wings 4.8 mm.).

The species of *Tanystigma* can be distinguished by the following key. Identification should be checked by reference to the original descriptions, especially those of the genitalia which show useful differences in proportions which are not easily expressed in a key.

Key to species of *Tanystigma*

1. Fore wing membrane hyaline except for pterostigma and postpterostigmal mark 2
– Fore wing with at least some markings in addition to pterostigma and postpterostigmal mark 4

2. Fore wing longer than 4.5 mm . . . . . *edwardsi*
– Fore wing shorter than 4.5 mm 3

3. Male phallosome with parameres almost straight (male only known) . . . . . *latimentula*
– Male phallosome with parameres strongly incurved . . . . . *paulum* (♂)

4. Fore wing 3.0 mm long . . . . . *striatifrons*
– Fore wing at least 3.9 mm 5

5. Fore wing with at least a small dark area in cell R_1 near wing margin 6
– Fore wing with cell R_1 near wing margin hyaline 8

6. Fore wing with extensive dark markings in cells R_1, R_3, and R_5 . . . . . *elongatum*
– Fore wing with cell R_5 hyaline 7

7. Fore wing with some shaded membrane at fusion of Rs and M . . . . . *dubium*
– Fore wing without shading at fusion of Rs and M . . . . . *bifurcatum*

8. Fore wing longer than 4.5 mm 9
– Fore wing shorter than 4.5 mm 10

9. Distal end of male parameres divided. Female subgenital plate lobe long and narrow, much longer than wide . . . . . *notialis*
– Distal end of male parameres pointed. Female subgenital plate lobe short, as wide as long . . . . . *tardipes*

10. Fore wing with dark shading around Rs and M fusion . . *inglewoodense*
– Fore wing without dark shading around Rs and M fusion . . *paulum* (♀)

Conclusion

Examination of the type of *Psocus striatifrons* shows that the species should be transferred to *Tanystigma* and that it is distinct from other species of that genus.

Acknowledgements

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References

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